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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,542	07/19/2001	Sheng Li	3442P015	1961
8791	7590	12/28/2005		
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030			EXAMINER HAILE, FEBEN	
			ART UNIT 2663	PAPER NUMBER

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/909,542

Applicant(s)

LI, SHENG

Examiner

Feben M. Haile

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-5, 8-12, and 14-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Khotimsky et al. (US 6,788,686), hereinafter referred to as Khotimsky.

Regarding claim 1, Khotimsky discloses the limitations: assigning a plurality of consecutive data frames to different data packets (**figure 4; frames 0-7 are assigned to 3 different paths**), each data packet including data frames that are sufficiently far apart such that loss of any particular data packet distributes impact that the loss has on quality of recovered data (**figure 4 and column 2 lines 47-49; each path includes frames that are 3 frames apart**), said assigning preventing each data packet from including consecutive data frames (**figure 4; none of the assigned 0-7 frames on the 3 different paths are consecutive**).

Regarding claim 2, Khotimsky discloses the limitations: packing said each data packet with assigned frames; and sending the data packets to a destination node (**column 1 line 66-column 2 line 3; incoming data flow is partitioned into segments and forwarded on multiple paths to a destination**).

Regarding claim 3, Khotimsky discloses the limitations: wherein said each data packet includes data frames that are at least two frames apart (**figure 4; each path includes frames that are 3 frames apart**).

Regarding claim 4, Khotimsky discloses the limitations: wherein said data frames are audio frames (**column 1 lines 16-21; exchanging information, voice**).

Regarding claim 5, Khotimsky discloses the limitations: wherein said assigning distributes data frames into different packets at a uniform interval (**figure 4; frames 0-7 are distributed into paths 1-3 at a uniform interval of 3 frames apart**).

Regarding claim 8, Khotimsky discloses the limitations: wherein said assigning plurality of consecutive data frames includes assigning a current data frame of said plurality of consecutive data frames to a packet that is at least two packets away from a packet that contains a previous data frame (**figure 4; current frame 3 is assigned to path 1 and previous frame 2 is assigned to path 3, which is 2 paths away**).

Regarding claim 9, Khotimsky discloses the limitations: distributing the data frames among a plurality of data packets, each data packet including the data frames from different parts of the multimedia entity (**figure 4; consecutive frames 0-7 are assigned to 3 different paths**), where said data frames from different said plurality of data packets parts are sufficiently spread out among to reduce the impact of a packet consecutive data frames into loss on quality of recovered data compared to packing sequential data packets (**figure 4 and column 2 lines 47-49; each path includes frames that are 3 frames apart**), said distributing preventing each data packet from

including consecutive data frames (**figure 4; none of the assigned 0-7 frames on the 3 different paths are consecutive**).

Regarding claim 10, Khotimsky discloses the limitations: wherein said multimedia entity includes a video frame (**column 1 lines 16-21; exchanging information, video**).

Regarding claim 11, Khotimsky discloses the limitations: wherein said multimedia entity includes a graphical image (**column 1 lines 16-21; exchanging information, video**).

Regarding claim 12, Khotimsky discloses the limitations: wherein said sufficiently spreading out includes packing a data packet with data frames that are at least two frames apart (**figure 4; each path includes frames that are 3 frames apart**).

Regarding claim 14, Khotimsky discloses the limitations: a processor configured to assign a plurality of consecutive data frames to different data packets (**figure 11 unit 200 and column 14 lines 12-15; a load balancer computes dispatch paths for incoming frames**), preventing each data packet from including consecutive data frames (**figure 4; none of the frames 0-7 that are dispatched on different paths are consecutive**), wherein each data packet is to include data frames that are sufficiently far apart such that loss of any particular data packet distribute impact that the loss has on quality of recovered data (**figure 4 and column 2 lines 47-49; each path includes frames that are 3 frames apart**); and a packetizer to pack a current frame into a data packet assigned by said processor (**figure 11 unit 230 and column**

14 lines 20-23; a demultiplexer uses the computed dispatch paths to output the frames to their respective paths).

Regarding claim 15, Khotimsky discloses the limitations: wherein said data frames are audio frames (**column 1 lines 16-21; exchanging information, voice**).

Regarding claim 16, Khotimsky discloses the limitations: wherein said data packet includes data frames that are at least two frames apart (**figure 4; each path includes frames that are 3 frames apart**).

Regarding claim 17, Khotimsky discloses the limitations: a frame to receive a sequence of data frames including consecutive parts of a segmented data entity (**figure 11; an ingress packet dispatch engine**); and a frame assigning element arranged to assign a current data frame in said sequence of data frames to a data packet, preventing each data packet from including consecutive data frames (**figure 11 unit 200 and column 14 lines 12-15; a load balancer computes dispatch paths for incoming frames, where none of the frames that are dispatched on different paths are consecutive**), wherein said frame assigning element assigns frame to the data packet different from a data packet containing a previous data frame (**figure 4 and column 2 lines 47-49; each path includes frames that are 3 frames apart**).

Regarding claim 18, Khotimsky discloses the limitations: wherein said segmented data entity is a video frame (**column 1 lines 16-21; exchanging information, video**).

Regarding claim 19, Khotimsky discloses the limitations: wherein said segmented data is an audio sequence (**column 1 lines 16-21; exchanging information, voice**).

Regarding claim 20, Khotimsky discloses the limitations: a frame packing element to pack data frames into assigned data packets (**figure 11 unit 230 and column 14 lines 20-23; a demultiplexer uses the computed dispatch paths to output the frames to their respective paths**).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 6, 13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Khotimsky et al. (US 6,788,686), hereinafter referred to as Khotimsky.

Regarding claim 6, Khotimsky discloses the limitations of base claim 5.

Khotimsky further teaches distributing data frames into different paths at a uniform interval of 3 (**figure 4**).

It would have been obvious to one having skill in the art at the time the invention was made to increase Khotimsky's uniform interval from 3 to 5. The motivation being to amplify the gap between frames in a packet to decrease the impact that a lost packet would have on the quality of recovered data.

Regarding claim 13, Khotimsky discloses the limitations of base claim 9.

Khotimsky further teaches at least 4 paths for distributing frames (**figure 4**).

It would have been obvious to one having skill in the art at the time the invention was made to increase Khotimsky's uniform interval from 4 to 5. The motivation being to amplify the gap between frames in a packet to decrease the impact that a lost packet would have on the quality of recovered data.

Regarding claim 21, Khotimsky discloses the limitations of base claim 1.

Khotimsky further teaches a fixed or random pattern of assigning segments to paths (**Figure 4 and Figure 7**).

It would have been obvious to one having skill in the art at the time the invention was made that Khotimsky's fixed or random pattern could have been a Gaussian distribution. The motivation being Gaussian distribution deals with probability and probability deals with certain (fixed) or uncertain (random) patterns, which Khotimsky fairly suggests.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- a) Balazinski et al. (US 6,738,379), Method of Preserving Data Packet Sequencing
- b) Dalby et al. (US 6,977, 934), Data Transport

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Feben M. Haile whose telephone number is (571) 272-3072. The examiner can normally be reached on 6:00am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gth 12/27/2005


RICKY Q. NGO
PRIMARY PATENT EXAMINER